Ed Bradley: We started out with Executive Order 13123, which we were under before Executive Order 13423. In March of 2003, my office was designated by the Secretary of VA as the Departmental Energy Conservation office. At that time all of the energy conservation process, procedures, policies, directives, etc. were divided up amongst the three administrations and the nine staff offices that make up the Veterans Affairs organization - with our healthcare administration being basically the frontrunner responsible for reports at the end of the year and so forth. With this consolidation, it brought the entire energy side of the house under one roof, department wide that we set policies and procedures and so forth. That was actually done in July of 2003.

After EPAct 2005, we then set up a department wide energy taskforce that was moving with various action plans dealing with investments, commodities, renewables, sustainability, etc. and so forth and with that, we were able to get even in our budget an earmark of about $25 million for us to run our programs. The investment programs - we would still use as much as possible alternative financing but we had other programs, research studies, feasibilities that we were working with that we needed the cash flow to be able to get those done. In I think it was in January of 2007, after 13423, within the department then we did combine energy with transportation and with environment programs. We coined that our EET (Energy, Environment, and Transportation) program and basically what it did, it set up a department wide initiative for policy, initiative for directions and a way of doing business instead of duplicate and potentially conflicting initiatives throughout the department. It gave a single source for our energy, for our senior official, who is our senior official for energy, environment and fleet and he is also the Assistant Secretary for Management. So that was a requirement of 13423, which we implemented as well.

Within our office of management, we are the department wide capital asset management. So we are looking at all of our capital assets, what part of infrastructure we look at, property, etc. This is where energy environment falls into the focus of what we're doing and why it landed where it did. We're responsible for all the departmental data and reporting, all of the initiatives, even with the enhanced use leasing. We have in the past done some co-generation energy plans and we expect to do some more in the future since things are settling down a little bit within the market. We think we have a chance to start doing those again.

We set up energy taskforce for each of our curriculums and basically we have a taskforce for energy management, environment as well as fleet and sustainability - and all of these right now are running through 2009, 2010. And for an example, I mentioned earlier that when we first started in 2003, we had a budget figure that we have earmarked in our budget for about 25 million that is earmarked and escalated with inflation each year through 2009, but with 2010 it appears that we're bumping up a little bit with all three programs, up to about 54 million so we've got some money there, we've got some FTE, I've got 8 people on staff right now. We also have in the field; we have approximately 90 field energy managers that are situated throughout VA that take care of our healthcare side as well as our cemetery side and our benefits side. And with that we also have roughly within the healthcare side there are 21 regional offices and within each of those regional offices we have what we call a division energy manager that has 4 or 5 other energy managers under them so we basically start funneling the information up to us into smaller detail.

Things that we're looking at, as a lot of you know, especially the ESCO community, we are doing energy assessments or audits throughout our facilities. Thus far we have done three rounds, which is probably about – I would guess somewhere around 60 to 75% of our facilities. We're getting ready to do a fourth round. As you know, the requirement now is 25%; we expect to meet that. We are getting ready to issue some RFPs for ESPCs with DOE using their IDIQ - what we call the government identified approach, and as you see on the slides there, there are four regions that we're looking at to start out on. Right now within VA they're going through technical and legal reviews and so forth so we have clearance to put them out on the street. So we hope to have them out let's say within the next three months. Hopefully sooner, but we will see what happens.

Also we're doing metering pallets, which includes bill auditing, commodity data, etc. and that too is going through some business case studies within the department so we can issue contracts on that. So we're moving real well on that and I talked about the energy managers.

Other things we are doing in the renewable side of it, we have some solar PV and thermal projects at Loma Linda, Dallas Texas, I think there's something going on at Long Beach California as well. West L.A., our – the most expensive campus we have in the system, we're also doing some thermal there. We just, as a matter

of fact we're trying to do a wind project and two days ago got legal clearance to be able to solicit on that for trying to do something at our St. Cloud medical center so that should be coming out on the street very shortly. And we're also looking at geothermal.

From the environmental side, since we are wearing three hats, as you can see there we're deep into the electronics stewardship and we're expanding the use of our environmental management systems. If there are any environmental people here that are familiar about appropriate sites, we took the initiative of naming all our sites appropriate and we're letting OFEE know that and so forth. And we actually took reverse psychology on that, is that everything is appropriate, you've gotta come back to us and tell us why you're not appropriate and so far no one's been able to do that. So basically I can say that every site in VA is considered appropriate from the EMS standpoint.

Fleet management, we also have 21 regional fleet managers designated and what my office is basically doing is policy directives, oversight of utilization. We do not purchase the fleets. They are basically done at the local levels through leasing with GSA or straight purchases for bigger equipment so forth as deemed necessary, but we do have oversight as to the way it's utilized. We're also working to put on-site alternative fuel sources and so forth. We just installed one and activated it this past July in San Francisco. There is some talk on the Hill in the 2009 budget to include some number of possible AFV stations at our sites through some markup of budgets and things like that so we're within our appropriations. So we're waiting to see what happens on that. And also they're supposed to be hopefully moving some stuff towards us on solar. So we have a lot of stuff coming at us that there should be a lot of work for everyone to do out there, I would hope within – whenever Congress decides to pass a budget. Hopefully it'll be sometime this year or early next so we can move forward.

Paul Carnley: I'll go over the vision that we have for not only the model energy bases but also for strategic energy management for the Air Force, our role at FCSA, some of our model energy base initiatives that we started, and then talk about some of the future things that we're going to do. Model energy base vision is simply this – to test drive our strategic approach. We have an overall Air Force strategy and we're gonna take some of those strategic elements, implement them at these model energy basis and see how they work, make sure they work before we implement them Air Force wide. This will enable us to develop scalable solutions. We also want to energize cultural change at the base level, get everybody on the

base, not just the energy manager or just civil engineering but everybody on the base engaged in energy management and energy conservation. And then take all these successes and promote them across the Air Force worldwide.

This is a very busy slide, I know, but this is our strategic plan basically in a nutshell. At the top we have all of our goals that are mandated by laws and also by executive orders. Next we have a governance board that takes those goals and translates those down throughout the Air Force. We have the four pillars as we call them. The first one is improved current infrastructure and we have a list of initiatives under those that we want to accomplish.

Improve future infrastructure with sustainability and energy conservation designs from the beginning. We want to expand our renewable use and also manage our costs. We found that we can save a lot of dollars, not necessarily Btus or kilowatts, but save a lot of utility dollars just by aggressively managing our utility cost, checking our bills, negotiating long term low rates with utility companies and that sort of thing. Underpinning these four pillars we have what we call the enablers. These things enable us to accomplish all these goals that we have, planning, programming and budgeting, making wise decisions and also getting the energy awareness down to the basic level. Notice at the very bottom, the very bottom piece that forms the foundation for the whole thing is culture change. We've all heard of culture change. We probably are tired of hearing it but until we get everybody involved in energy conservation, it's really not going to go very far.

At the Air Force facility energy center we are providing guidance for our model energy bases, helping them develop their programs and plans, trying to identify projects and initiatives that we may need to undertake. And we don't really just stop at advocating for model energy base funds, we build a business case and send that up to headquarters and try to convince them to carve out some of these, some of our dwindling O&M budget to fund these energy initiatives and we've done a pretty good job so far at this. And then we also conduct regular visits to continue our focused efforts. Here's another listing of energy conservation opportunities.

Decentralizing heat plans, I'll just touch on that one briefly. We decentralized one heat plant in Elmendorf and by decentralizing that we reduced overall energy consumption for the Air Force, Air Force wide by 2% for one year. It was a tremendous energy saver. And some of these others probably won't have that big of an

impact but they all have an impact on our energy intensity reductions.

At Barksdale we've done a little over $2.5 million worth of energy initiative opportunities there. We've done a lot of EMCS and lighting upgrades, replaced incandescents with CFLs, hired a REM for them, installed a lot of advanced meters and also they have started doing some energy conservation designs for the projects. Next year, that's all that we did in '07. Next year there's 21 projects totaling about $7 million that we want to undertake there at Barksdale and all these projects are going to compliment that strategic pillar plan that we have. We are currently in advertising to do a ground source heat pump project that will retrofit a dormitory with ground source heat pumps. We're going to use Barksdale and McGuire as a sort of controls and try to prove out exactly how many Btus we are saving by using ground source heat pumps.

At McGuire, not quite as much money invested there so far but the same types of things, advanced meters, that we did an ESIA project recently, improved some building envelopes, sealed the buildings up, do some insulating, that sort of thing. Right now they have an ESPC under development and they are looking at decentralizing their central heat plant, doing a base wide EMCS upgrade, some lighting improvements and chiller plant upgrades. Additionally to that there's HVAC and EMCS projects, lighting, ground source heat pumps and renewables - another $6 million worth of work that we have planned for next year and as I said earlier, we're working on this ground source heat pump science project between the two bases.

Recently we named a new Air Force model energy base and that's the U.S. Air Force Academy. The reason we chose this, the academy, is for the educational and cultural linkage between the airmen that are going to Air Force Academy and as they are trying at the Air Force Academy to be future leaders in the Air Force, we feel this will get them introduced and ingrained into sustainability and energy conservation concepts as part of their Air Force education and they will take that as leaders into the Air Force and help us manage our energy a lot better. It will institutionalize our cultural change that we're trying to do and our overall goal is to try to get this to be a net zero installation by doing sustainables, some renewables, and a lot of energy conservation projects.

Future initiatives, programming and planning projects are very, very critical. We have to get those into the budgeting cycle. We have to have the funding in order to be able to execute those. We'll

take these projects that are very successful and advertise those successes Air Force wide to try to energize other bases to step on board and take these initiatives and move forward with them. And we'll be able to scale these successes for both larger and smaller bases.

Skye Schnell: I'd like to give everyone an idea of what our TEAM initiative is, what are some of the key aspects of the program, what we've accomplished, what we've teed up to do over the next six months and also if you're interested in doing an enterprise wide activity like we'll be discussing today, I'd like to talk about how we might be able to help you. The TEAM initiatives is Transformational Energy Action Management and it was accomplished by a team of people at DOE, I'm very proud of that team and I see a lot of people here, if you could stand if you're part of a DOE lab, if you're part of the FEMP initiative, if you're a private sector firm, if you could just stand up so people can see that it – this involved a lot of people. If you could just stand so folks get a sense of you all and I want to thank you for your work on this project.

If you were at the opening ceremony you saw the DVD of Secretary Bodman. He is very much engaged in this; he's very proud of the efforts of all agencies and in particular of what has happened at DOE. And one of the key ingredients of a successful enterprise wide initiative is to have the head of that enterprise actively engaged, and I think you saw that he was one very engaged person. Just to give you a little idea of where we were before transformation, we've always been one of the top energy using agencies and that has been a position that we'd like to work our way out of but we have been and continue to be right now a top energy user. We have a number of lab facilities that are involved in some very energy intensive applications and very strong missions so it's been a challenge in terms of coming up with creative ways to reduce energy, well, if possible, helping with our mission activities.

Just looking back a couple years to FY 06, DOE was really in a position of having reduced the amount of direct appropriations that we spend on energy. If you look back maybe 15 years, we were spending 20, 30 million a year on energy projects and I think as of '06 or '07, the special appropriations that we requested amounted to zero for those efforts. At the same time that that's happening, you know the wave was building in terms of all of the energy, renewable energy, sustainability, metering goals, and so we were facing a challenge. How would we accomplish all these goals even though our budgets were being reduced? Also a few years ago our

activity in alternative finance had been just bumping around at a fairly low level.

We had only issued I think two ESPC delivery orders that year. I'm not sure if we did any UESCs that year, and other agencies like DOD and UESC were moving along smartly and I think they did about 36 at that period. We didn't have a really detailed enterprise wide plan on how we were going to achieve the goals. We had very few on site renewables. Most of our renewable goals were achieved by the purchase of RECs and I'm proud to say our lab folks, even in the face of small appropriations, really had an excellent track record of achieving energy intensity reductions but we were concerned that as the bar was risen, we really needed to have a new approach.

The transformation process does rely strongly on having your most senior people engaged. We have, we were fortunate in having Andy Karsner as the head of EERE. Andy is a very strong believer in public private partnerships and him working with the Deputy Secretary and the Secretary really created the TEAM Initiative. And as I think the Secretary had mentioned last year and I think reinforced this year, he really wanted to lead and become a first-mover in the area of meeting all the environmental energy transportation and sustainability related goals of the Executive Order and also of Law. He wanted to exceed those goals in many key areas, particularly in the area of energy and renewable energy, and he really also wanted to take a leadership role in transportation.

The goals that we have are the ones that all of us face in terms of energy intensity reduction, the achievement of sustainability standards; DOE has chosen the LEED gold standard to be the standard for our new building construction. Proud to say that DOE also has at least one platinum building that has been built. We're very focused on the guiding principles and also increasing the use of alternative fuels and reducing petroleum use.

Well we have some wonderful things going on here. Okay – I'll try not to screw this up too badly today. The goals that we have from the Secretary and from law and executive order were put into a key implementation document at DOE. It's called DOE Order 430.2B and this is the document that provides clear marching orders to our sites and to the M&O contractors that work on our behalf through their contracts and it's very important for us to take these goals and convert it into this type of a document because these are the documents that really drive the performance. And I remember

early on talking to someone in the DOE field about the executive order and the person was interested but her point was that until it's converted into the DOE process, into the DOE order, it really wasn't on her screen. And so this was a very important first step. It's something that we put together in record time. Cyrus, you were key in getting that thing out and done and I can't remember an order that went through DOE as quickly as that one.

We also very early on decided to try to convert these goals into very clear milestones that we could track and we also rolled that down on a site-by-site basis. We're kind of fortunate in being able to basically look at 40 DOE sites and see the – or cover about 80% of our energy use. So we have a fairly manageable amount of sites that we're working with and so we developed reporting for each and every site. We developed milestones for each of the key steps in the process and as I'll discuss, our process started out with a very heavy reliance on the public private partnership in terms of alternative finance. And so our first round of reporting basically took the alternative finance process and we developed key milestones for selecting an ESCO or utility for developing the initial proposal for getting through the first review board, for going to the final proposal and the next step of the review board and the – and then ultimately the award.

And we established a rating, a very simple red, yellow, and green rating that depending on where we were in the process; provided a clear signal to the sites that we were working with and also to upper management about how the sites were doing in terms of each one of these steps. Are they doing it in a timely manner? Are they meeting the objectives of the initiative? And that rating process really brought a lot of attention to this particular initiative and this report was sent up to senior management on a weekly basis. It was briefed to the Deputy Secretary and to the Secretary.

And so people took it very seriously. They really wanted to be viewed as a green program office and a green site and that helped us get the kind of attention. We've got a wide ranging mission, and energy management is only one little piece of what DOE has to worry about so it was very helpful having this as a very real and constant reminder that this is very important to the Secretary. We're also involved with a lot of engagement with the sites and with the program offices in terms of weekly calls and efforts to communicate across the organization.

Coordination is really key; it's very important to have good project teams in your headquarters, organizations, as well as in the field,

all focused on the same goals and the same milestones. We did develop a headquarters project team, a talented group of folks that really helped pull together all of the policies and the procedures and the reports and worked hard to keep the process moving and to troubleshoot problems and to keep thing on schedule. Executive Steering Committees composed of Under Secretaries and our Assistant Secretary and that really helped ensure that the program offices maintained a focus on this effort and did all that they could to drive this process through their organizations. I mentioned that the Deputy Secretary and Secretary were briefed and we just had a lot of communication with the program offices. I viewed it as very positive and productive, it was challenging at times but you know for the most part, everyone was clear on the same goals that we were working for.

Staff development was a very key aspect. You know as I indicated before, DOE had been relatively inactive in the world of alternative finance and so we took this opportunity to introduce new training. We did a lot of web based training for all of our sites. I think we held training at least monthly that was tailored to our organization. We established a Center of Excellence in Golden to provide additional contract support, quick response to the contracting officers around DOE that needed additional help. And we also took a look at our internal procedures. The Secretary was here a year ago and we were hoping that a year later we would have significant accomplishments that he would be able to announce as a follow-up to his challenge that he gave us a year earlier and so there was a lot of folks on process because if you look at the average time to award for alternative finance projects, you know it frequently runs in the 22 to 24 month period and we needed to do things in a year. And we're happy that we're able to award a number of contracts within that year timeframe and we continue to strive towards trying to improve our processes.

From the get-go you know we understood that we would not have appropriated dollars to do this and so early on we established what we call an order of operations. And under that approach, we decided that we would try wherever possible to utilize private sector financing, the ESPCs, UESCs, power purchase agreements to fund the accomplishments of all of the goals. And that if there was a case where the private party financing did not allow us to accomplish the goal, then we would look for direct appropriations. Unfortunately alternative finance is a great multi-tool that can help address the energy efficiency, the renewable energy, metering, sustainability; all those measures can be addressed very effectively and efficiently through third party financing. And that was good,

so we were able to get great traction in those areas using alternative finance. There were some other areas around transportation that you know right now is not as fully developed through those tools and those are the areas where we use some appropriations to build alternative fueling stations and that sort of thing.

Well status to date, it's been a very busy 12 months. We have over $400 million in project investment in the works to be awarded. We hope to try to keep pace with the revenues of the *Batman* movie, If we can invest as much in efficiency as America invests in *Batman*, then we'll feel like we've been tremendously successful. There was a press release for projects that have been awarded at Oak Ridge, Idaho National, Lawrence Livermore and NETL. And we hope that we'll have 16 more projects awarded by the end of the year and the beginning of next year. These projects include some very exciting technologies; particularly ones that are helping us achieve our renewable goals in terms of PV and thermal. We have a large biomass co-generation plant that we are working on as well as a very significant concentrated solar plant. And those will really transform the way that we've approached renewable energy at DOE. We've conducted comprehensive site evaluations at all of our major sites and we are working on implementing alternative fuel stations as well so that we can fully utilize the alternative fuel vehicles that we've put in place around DOE.

We have attempted to strive to include innovative technologies and to commercialize technologies that, many of which, have been the subject of research investment at DOE and at NETL. We have the rooftop wind, hybrid solar, Oak Ridge biomass, steam generation, advanced metering, solar preheating and a number of other initiatives. Really we have attempted to get renewables in all of the ESPC projects and I think we have been relatively successful. The renewables relate very much to the potential of the site and also to the economic potential related to state funds in many regards, particularly with PV but the biomass has been able to really – we've been able to stand it up pretty effectively across the nation.

We spent a lot of time monitoring our progress. We have thermometers showing our progress towards the goal. We are striving to you know blow well beyond the 30% reduction in terms of energy intensity. Our lab sites were able to accomplish a 13% reduction in intensity through 2007 and the TEAM Initiative has added another 7 percentage points since then for 20%. We think there could be additional rounds of alternative finance that we will be looking at as we work to cover all of the energy opportunities at

a site. So we're making good progress. I think the Secretary originally had hoped and we're still on track to do this and it's basically to provide a stack of accomplishments and plans for his successor so that really all we have to do is implement very clear executable plans to achieve the goals that we're on the hook for. He didn't want to just give them a long to-do list and a huge goal that he had to meet in the few years remaining.

This slide basically illustrates how we drive things down to the site level. This basically indicates the remaining energy savings that we are going to need at our different sites to achieve our goals in terms of water intensity reduction; all of our progress towards water intensity has been achieved through our alternative finance mechanisms. It's a little challenging in that we get our water fairly cheap, and so it's difficult to identify cost savings that will drive efficiency measures but we've made a good deal of progress and we have a number of other projects that have been identified in our process. So we're still optimistic that we will be able to achieve our reduction. Again we have that broken down by site. Renewable energy, again all of these – the accomplishments to date have occurred in the context of the TEAM initiative. We're very excited about that and we fully intend to blow the renewable energy goal away as we complete our process.

Again we have a distribution – we are trying to develop some very large, almost utility scale renewable projects so we see that a number of sites here based on our plans have really blown the goals away. The next step, which we're focused on really between now and the end of the calendar year is to develop executable plans, a great deal of detail at each of the sites, indicating very clearly what projects are going to be lined up, what energy savings they will contribute, what the cost will be, what will be the source of the financing. And these are going to be key documents that provide us all of the detail that we need to be able to show the Secretary a great deal of detail and granularity that we know exactly how we're going to achieve all of the goals that he has put before us.

Okay in terms of next steps, one of the things that our Secretary is very excited about is the potential to utilize enterprise wide approaches across the federal government and we've had a number of conversations with agencies throughout government, the Navy, Bureau of Prisons, GSA, State Department, there are a number of groups that are – have really aggressive plans in place to achieve the energy goals that are before us. And we are working with them to share some of the activities and processes that we have put into

place in this effort. If you are interested yourself, for your agency, please let us know. We have a lot to share with you and if you need help engaging your senior-most people, I think DOE senior people would love to work with you in getting people excited about this type of an approach.

[End of Audio]